

ABSTRACT OF THE DISCLOSURE

5 A plasma processing apparatus includes a processing
container 53, a mounting table 61 arranged in the processing
container 53 to support a wafer W, a sealing plate 55 opposed to
the wafer W supported by the mounting table 61, an annular antenna
73 arranged on the sealing plate 55 and consisting of an annular
waveguide to introduce a microwave into the processing container
53 through the sealing plate 55, the annular antenna 73 being
10 arranged so that a plane containing an annular waveguide path
defined by the annular waveguide is generally parallel with the
sealing plate 55, a directional coupler 79 arranged on the periphery
of the annular antenna 73, a propagation waveguide 81 connected
to the directional coupler 79 and a microwave oscillator 83
15 connected to the propagation waveguide 81. Accordingly, it is
possible to form an uniform microwave in the antenna, so that an
uniform plasma can be produced in the processing container.

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